

Serial No. 10/698,496
Attorney Docket No. 19799-206

Amendments to the Claims

Please amend the claims as follows:

Claim 14 (original): A catheter having a low profile, short, tapered distal tip comprising:

a shaft having proximal and distal ends, a distal terminus and at least one lumen sized to receive a 0.035 inch guidewire,

a distal dip having a tip diameter measuring less than approximately 0.063 inch; and

a taper length of approximately 3 millimeters or less.

Claim 15 (Currently Amended): A catheter as defined in claim ~~[[13]]~~ 14, wherein the catheter is a papillotome having multiple lumens and a cutting wire extending through at least a portion of one of the lumens and terminating adjacent to the distal tip.

Claim 16 (Currently Amended): A catheter as defined in claim ~~[[14]]~~ 15, wherein the cutting wire exits the lumen along a portion of the shaft and reenters the lumen through a distal skive hole at a point adjacent the distal tip of the shaft;

a tip length is defined between the distal skive hole and the distal terminus measuring approximately 5 millimeters or less; and

the taper is positioned between the skive hole and the distal terminus.

Claim 17 (original): A catheter as defined in claim 15 further comprising a radiopaque marker at the distal tip.

Claim 18 (original): A catheter as defined in claim 16 wherein the radiopaque marker is contained in the lumen occupied by the cutting wire.

Claim 19 (original): A catheter as defined in claim 14 wherein the shaft comprises three lumens.

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Claim 20 (original): A catheter as defined in claim 14 wherein the tapered portion is formed by the steps of:

temporarily placing thermally insulative material segments over regions of the shaft immediately proximal to and distal to the tapered portion region,

grasping the shaft at locations proximal and distal to the tapered portion region, heating the tapered portion region sufficiently so that it may be plastically reformed,

placing the tapered portion region in tension by pulling axially in opposite directions at the grasping locations,

removing the thermally insulative material.

Claim 21 (original): A catheter as defined in claim 14 wherein the shaft has previously undergone a diameter reduction through a necking operation.

Claim 22 (original): A catheter as defined in claim 19 wherein at least 2 lumens extend to and open to the distal terminus of the catheter.

Claim 23 (original): A catheter as defined in claim 14 wherein, the tip diameter measures in the range of approximately .055 inch to .063 inch.

Claim 24 (original): A catheter as defined in claim 14 wherein the tip diameter measures approximately .059 inch or less.

Claim 26 (New): A catheter having a low profile, short, tapered distal tip comprising:

a shaft having proximal and distal ends, a distal terminus and at least one lumen sized to receive a 0.035 inch guidewire;

a distal tip having a tip diameter measuring within the range of 0.055 inch to 0.063 inch; and

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a taper length within the range of 1.5 mm to 4.5 mm.

Claim 27 (New): A catheter according to claim 26, wherein the tip diameter is approximately 0.059 inch.

Claim 28 (New): A catheter according to claim 26, wherein the taper length is approximately 3 mm.

Claim 29 (New): A catheter as defined in claim 15, wherein the cutting wire exits the lumen along a portion of the shaft and reenters the lumen through a distal skive hole at a point adjacent the distal tip of the shaft;

a tip length is defined between the distal skive hole and the distal terminus measuring within the range of 4.5 to 6 mm; and
the taper is positioned between the skive hole and the distal terminus.